SS5-Speed Transmission Kit for Dry-Type Clutch
Instruction Manual

・Thank you for purchasing one of our products. Please strictly follow the instructions to install and use the kit.
・Before installing the kit, please be sure to check the kit contents. If you have any questions about the kit, please contact your local TAKEGAWA dealer.

◎ **Please note: Illustrations and photos may vary from actual hardware.**

Item No.	：０２－０４－０２０４	Street
	：０２－０４－０２０５	Super street
	：０２－０４－０２０６	S - Touring
	：０２－０４－０２０７	Super close
Fits:	：Monkey & Gorilla	
Frame No.	：Z50J-1300017～	
	：AB27-1000001～1899999	

Please read the following before starting the installation.

◎ This 5-Speed Transmission Kit is for exclusive use with our dry-type clutch. And please note that this Kit cannot be used with our wet-type or standard clutch.
◎ A kick starter spindle supplied in this Kit is a B-type. So, before installation, be sure to check the frame number of your motorcycle.
◎ For the installation of the transmission, the left side crankcase needs processing, which please do correctly referring to the figure.
◎ This instruction manual refers to the work after the removal of an engine from the body, and removal and disassembly of a cylinder head, cylinder, piston, flywheel, starter assembly, clutch assembly, primary driven gear, driven gear, oil pump and cam chain. For instructions about such removal work, please refer to the relative HONDA's genuine service manual for your proper work.
◎ This instruction manual and the service manual are prepared for those who have acquired basic skill and knowledge.
Therefore, technically inexperienced people or people without sufficient knowledge may not be able to install these products correctly. Improper installation because of insufficient skill and knowledge could lead to parts breakage.
◎ **Before riding, check the all transmission, gear and drive train that move and operate smooth and properly.**

Features

○ This 5-speed transmission is a close-ratio type which enables the effective use of the torque band in comparison with the standard 3- or 4-speed wide-ratio transmission.
The Street Transmission uses a start-and-acceleration-oriented 1st gear, and the gear ratio is so designed to be user-friendly even for street use.
○ The Super street transmission has all the more sporty gear ratios with the 4th and 5th gears of the Street transmission rendered close-ratio.
○ The S-touring transmission comes equipped with wide-ratio gear for touring to suit large displacement capacity and can also be used with a standard engine if the sprocket is changed.
○ The Super Close Transmission is designed to have highly potential gear ratios when used with a racing camshaft. Moreover, an optional gear set is available for each gear. Thus, you can change the gear ratio. A wide range of setting for racing purposes will become possible with the final gear adjustment.

Gear ratio

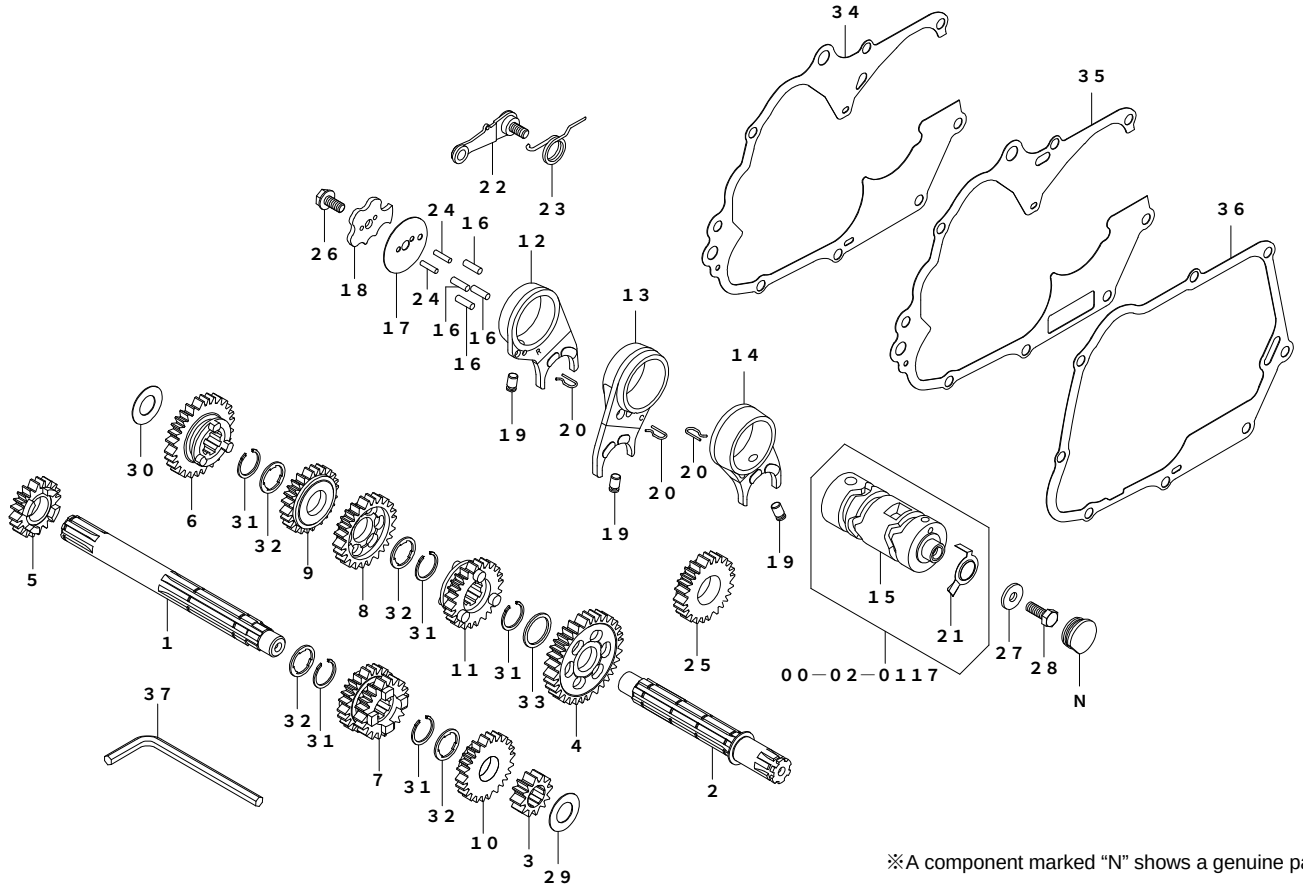
Item No.	02-04-0204	02-04-0205	02-04-0206	02-04-0207
Kind	Street	Super street	S - touring	Super close
1st speed	2.357 (33 / 14)	2.357 (33 / 14)	2.357 (33 / 14)	2.357 (33 / 14)
2nd speed	1.764 (30 / 17)	1.764 (30 / 17)	1.611 (29 / 18)	1.526 (29 / 19)
3rd speed	1.400 (28 / 20)	1.400 (28 / 20)	1.190 (25 / 21)	1.286 (27 / 21)
4th speed	1.136 (25 / 22)	1.136 (25 / 22)	0.958 (23 / 24)	1.130 (26 / 23)
5th speed	0.958 (23 / 24)	1.000 (24 / 24)	0.807 (21 / 26)	1.000 (24 / 24)

⚠ CAUTION The following show the envisioned possibility of injuries to human bodies or property damage as a result of disregarding the following cautions.

- Please do the work correctly, using the right special tools, when needed. And apply oil or grease to the designated portions.
- In tightening bolts and nuts, be sure to use a torque wrench and tighten them to the specified torque.
- As for gaskets and packings, always use new ones. In case you continue using these parts, carefully check them for wear or damage, and when detected, always replace these worn or damaged ones with new ones.
- The installation of this Kit changes the gear-change pattern to the return system of one down and four up. Shift gears securely only when you have let throttle back to an original position. Shifting gears forcibly or at high engine revolution will cause the gear to get damaged or worn out.
- Before driving, always check hardware for slack in bolts and other parts or for abnormal sound. And when you notice something unusual with your motorcycle while riding, immediately stop riding and park it in a safe place to check what has gone wrong with it.
- When you start the engine with a kick starter, press down the starter arm firmly just when you feel some resistance on the starter arm, or at the time the starter pinion and ratchet fit into each other. Otherwise, the gear will be damaged. And in the case of starting the engine of a racing motorcycle by moving it forward, disengage the clutch after the gear shift, and push it forward. A violent shock to the gear may cause it to get damaged.
- Please never use this Kit together with other manufacturers' ignition-system parts because it is likely that the gear may get damaged owing to impact load felt at the time of starting the engine with a kick starter.

◎ Please be informed that, mainly because of improvement in performance, design changes, and cost increase, the product specifications and prices are subject to change without prior notice.
◎ We shall be held free from any kind of warranty whatsoever of products other than this product if the glitch takes place on the other products than this one after the installation and use of this product.
◎ This manual should be retained for future reference.

～The transmission consists of～



※A component marked “N” shows a genuine part.

02-04-0204 (Street)

No.	Part name	Qty	Repair part item No.	In packs of
1	Main shaft	1	23212-165-T30	1
2	Counter shaft	1	23221-165-T12	1
3	Main shaft first gear (14T)	1	23222-165-T20	1
4	Counter shaft first gear (33T)	1	23421-165-T22	1
5	Main shaft second gear (17T)	1	23431-051-T01	1
6	Counter shaft second gear (30T)	1	23441-051-T01	1
7	Main shaft third/fourth gear (20T/22T)	1	23451-051-T00	1
8	Counter shaft third gear (28T)	1	23461-051-T20	1
9	Counter shaft fourth gear (25T)	1	23481-051-T10	1
10	Main shaft fifth gear (24T)	1	23491-051-T00	1
11	Counter shaft fifth gear (23T)	1	23501-051-T00	1

02-04-0205 (Super Street)

No.	Part name	Qty	Repair part item No.	In packs of
1	Main shaft	1	23212-165-T30	1
2	Counter shaft	1	23221-165-T12	1
3	Main shaft first gear (14T)	1	23222-165-T20	1
4	Counter shaft first gear (33T)	1	23421-165-T22	1
5	Main shaft second gear (17T)	1	23431-051-T01	1
6	Counter shaft second gear (30T)	1	23441-051-T01	1
7	Main shaft third/fourth gear (20T/22T)	1	23451-051-T00	1
8	Counter shaft third gear (28T)	1	23461-051-T20	1
9	Counter shaft fourth gear (25T)	1	23481-051-T10	1
10	Main shaft fifth gear (24T)	1	23491-165-T01	1
11	Counter shaft fifth gear (24T)	1	23501-165-T00	1

02-04-0206 (S-Touring)

No.	Part name	Qty	Repair part item No.	In packs of
1	Main shaft	1	23212-165-T30	1
2	Counter shaft	1	23221-165-T12	1
3	Main shaft first gear (14T)	1	23222-165-T20	1
4	Counter shaft first gear (33T)	1	23421-165-T22	1
5	Main shaft second gear (18T)	1	23431-181-T01	1
6	Counter shaft second gear (29T)	1	23441-181-T01	1
7	Main shaft third/fourth gear (21T/24T)	1	23451-181-T10	1
8	Counter shaft third gear (25T)	1	23461-181-T10	1
9	Counter shaft fourth gear (23T)	1	23481-181-T20	1
10	Main shaft fifth gear (26T)	1	23491-181-T00	1
11	Counter shaft fifth gear (21T)	1	23501-181-T00	1

02-04-0207 (Super close ratio)

No.	Part name	Qty	Repair part item No.	In packs of
1	Main shaft	1	23212-165-T30	1
2	Counter shaft	1	23221-165-T12	1
3	Main shaft first gear (14T)	1	23222-165-T20	1
4	Counter shaft first gear (33T)	1	23421-165-T22	1
5	Main shaft second gear (19T)	1	23431-165-T00	1
6	Counter shaft second gear (29T)	1	23441-165-T01	1
7	Main shaft third/fourth gear (21T/23T)	1	23451-165-T00	1
8	Counter shaft third gear (27T)	1	23461-165-T00	1
9	Counter shaft fourth gear (26T)	1	23481-165-T00	1
10	Main shaft fifth gear (24T)	1	23491-165-T01	1
11	Counter shaft fifth gear (24T)	1	23501-165-T00	1

Common Parts

No.	Part name	Qty	Repair part item No.	In packs of
12	Right gear shift fork	1	00-02-0014	1
13	Center gear shift fork	1	00-02-0015	1
14	Left gear shift fork	1	00-02-0016	1
15	Gear shift drum	1	———	
16	Dowel pin, 4x10	4	00-02-0049	5
17	Gear shift drum side plate	1	00-02-0018	1
18	Gear shift drum stopper plate	1	24411-051-T01	1
19	Gear shift fork guide pin	3	00-02-0048	3
20	Gear shift fork guide pin clip	3	24263-165-T00	1
21	Neutral switch rotor	1	00-02-0118	1
22	Shift drum stopper arm COMP.	1	00-02-0025	1
23	Shift drum stopper spring	1	24435-GEF-T00	1
24	Stopper plate setting pin	2	00-02-0054	1
25	Kick starter pinion (25T)	1	28211-165-T20	1
26	Knock bolt, 6mm	1	00-02-0013	1
27	Plain washer, 6X17X2.3	1	00-02-0050	1
28	Hex bolt, 6x16	1	00-00-0032	3
29	Thrust washer, 14mm	1	00-02-0047	1
30	Thrust washer, 13.5mm	1	00-02-0055	1
31	External circlip, 17mm	5	00-02-0005	5
32	Spline washer, 17mm	4	00-02-0023	5
33	Thrust washer S, 17mm	1	00-02-0024	2
34	Crankcace gasket (6V)	1	00-01-1032	1
35	Crankcace gasket (12V)	1	00-01-0096	1
36	Right crankcace cover gasket	1	00-01-0095	1
37	Hex wrench, 5mm	1	———	

※ Please order repair parts with the Repair Part Item No. Without the repair part item NO., we may not be able to accept your orders.
Some parts are only available as a set. In this case, please order them with the set number.

～On processing～

⚠ CAUTION	Always work with gloves on to protect your hands. Otherwise, you may suffer injuries.

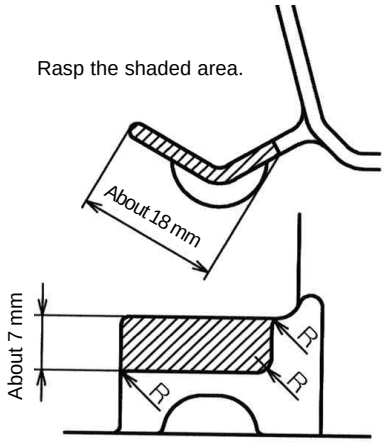
Left side crankcase

○Fold down the circled portion on the left side crankcase with a plier, and rasp the circled portion with a file or a hand grinder. Then wash the left side crankcase with water.

※ Cover the bearings with a tape not to get any dirt, dust or chips into them.

※ Work with gloves on lest you should cut your hands with edges of the case.

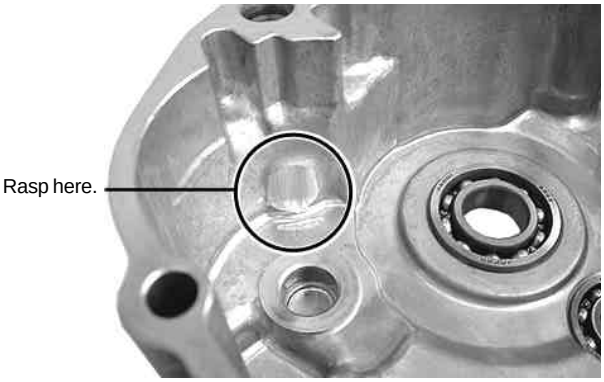
Rasp here.



○ In case a kick starter pinion and a left side crankcase interfere with each other on motorcycles with frame Nos from AB27- onwards, cut off the circled portion until the gear does not touch it any more.

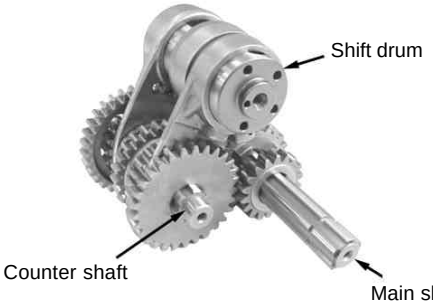
※ Cover the bearings with a tape not to get any dirt, dust or chips into them.

※ Work with gloves on lest you should cut your hands with edges of the case.



～On installation～

1 . Apply grease to the lips of the oil seal of the left side crankcase shift spindle. Apply oil to the bearings of the right and left side crankcases. And place the left side crankcase on the pedestal. Apply oil to the rubbing surfaces of the gears on the sides of the mainshaft and countershaft. And mesh together the gears of the mainshaft and countershaft, and fit the hook of the shift fork into the grooves on the gear.

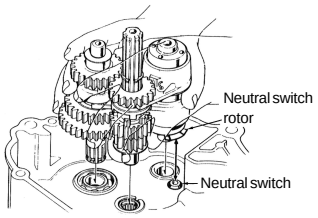


2 . Install into crankcase the main shaft, counter shaft and shift drum all together as a unit.

※ Do above installation with the transmission in neutral, or at the position where the neutral switch and switch rotor mesh together.

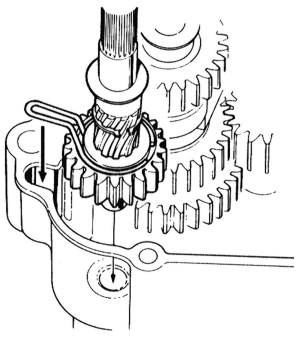
※ Never forget to install the thrust washer. As the stock washer is not to be used, remove it.

※Install the shaft with care so the lip of the countershaft oil seal may not turn up.



3 . Remove, from the kick starter spindle, a 17mm washer, 20mm set ring, starter drive ratchet, 20mm set ring, 20mm thrust washer and starter pinion, in this order.

Install the starter pinion included in the Kit onto the kick starter spindle, and install the above-mentioned parts in the opposite order of removal.

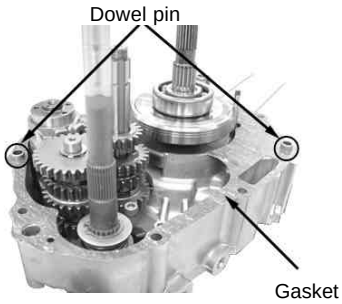


Meshing its friction spring with grooves in the left side crankcase, attach the starter spindle to the left side crankcase.

※ Apply engine oil to the starter pinion and starter spindle.

4 . Degrease the mating surfaces of the right and left side crankcases. And set a dowel pin and attach new gaskets. Put together the right and left side crankcases, and check that the they fit together closely. With the left side crankcase up, place the bolts, and tighten first those placed in the middle, and then those placed outside but diagonally and alternately.

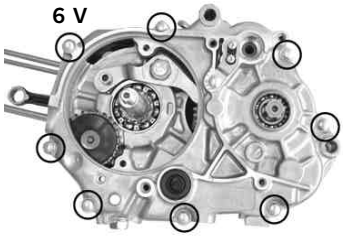
Specified torque: 10 N • m (1.0 kgf • m)



5 . Put together the right and left side crankcases.

With the left side crankcase up, place the crankcase bolts on the crankcase, and tighten them diagonally in a few steps to the specified torque.

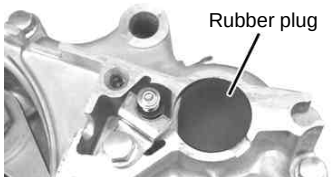
Specified torque: 10 N • m (1.0 kgf • m)



6 . Setting the round corner of the shift drum side washer to face toward the shift drum, tighten a hex bolt to the specified torque.

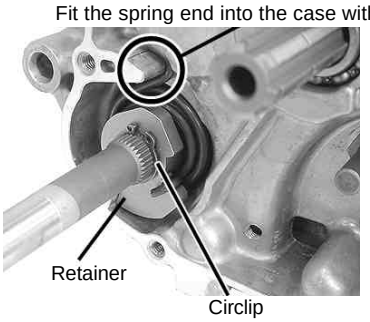
Specified torque: 12 N • m (1.2 kgf • m)

Install the rubber plug.



7. Turn around the crankcase so the right side crankcase faces upwards. And install the kick starter spring and kick spring retainer to the starter spindle. And fit the spring end into the case with a click. And install the external circlip.

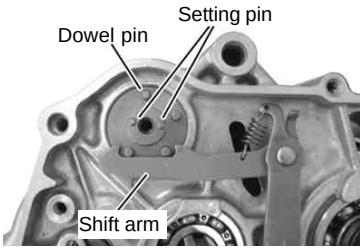
※ Be careful not to get your fingers caught when fitting the spring into the case.



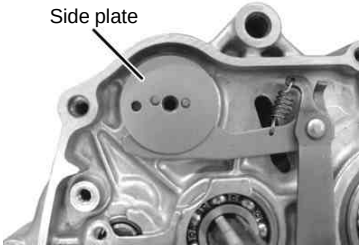
8. Fit four dowel pins and two stopper plate setting pins into the shift drum, and install the gear shift arm onto crankcase.

※ Apply engine oil to the sliding surface of the shift spindle and gear shift arm.

※ Apply grease to the lip of the oil seal for the left side crankcase shift spindle.

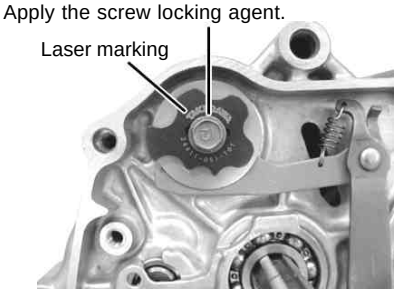


9. Install the shift-drum side plate on the shift drum, meshing the holes on the shift drum side plate with the shift drum setting pin.



10. Fit the shift drum stopper plate into the shift drum setting pin, keeping the marking on the plate visible. And then, apply thread lock cement to the thread of the dowel bolt, and tighten it to the specified torque.

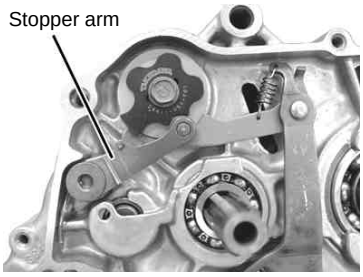
Specified torque: 16 N • m (1.6 kgf • m)



11. Place the spring in the stopper arm, fit them into the stopper plate on the case, and tighten the bolt to the specified torque.

Specified torque: 10 N • m (1.0 kgf • m)

※ Be careful not to get your fingers caught when fitting the spring into the case.



12. Turning the mainshaft with hands, turn the knock bolt on the stopper plate with a socket wrench, and check if the gears can shift smoothly.

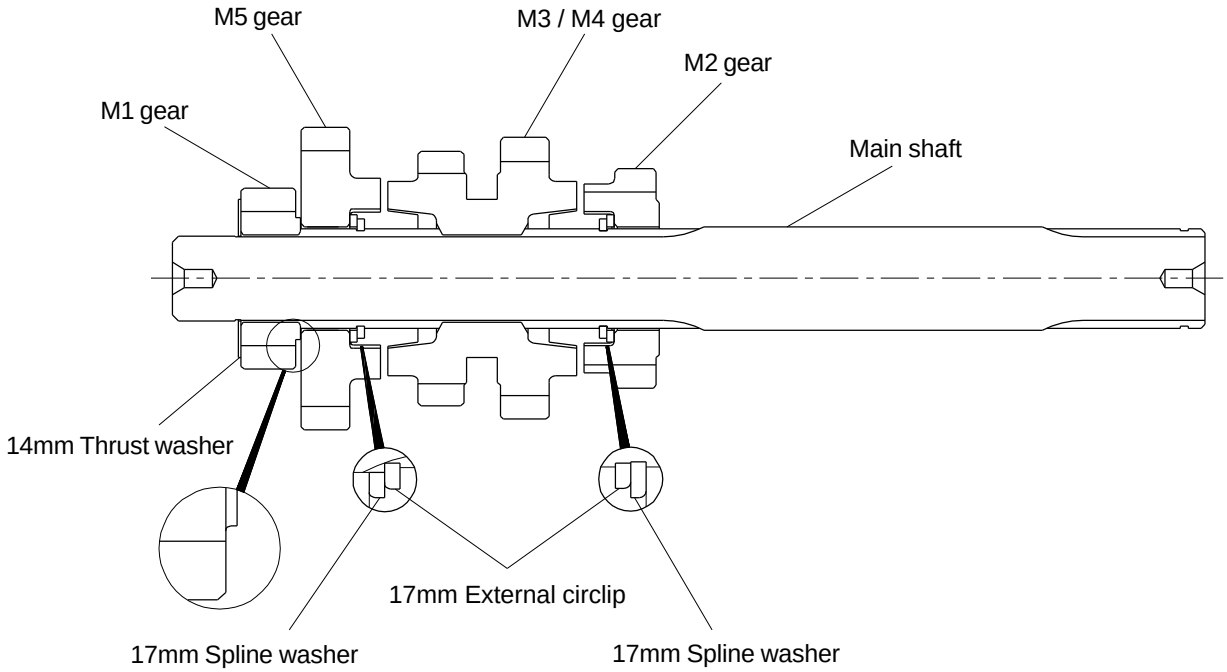
Check that there is some free play in the mainshaft and countershaft in the direction of thrusting.

※ Do not turn the shift drum forcibly.

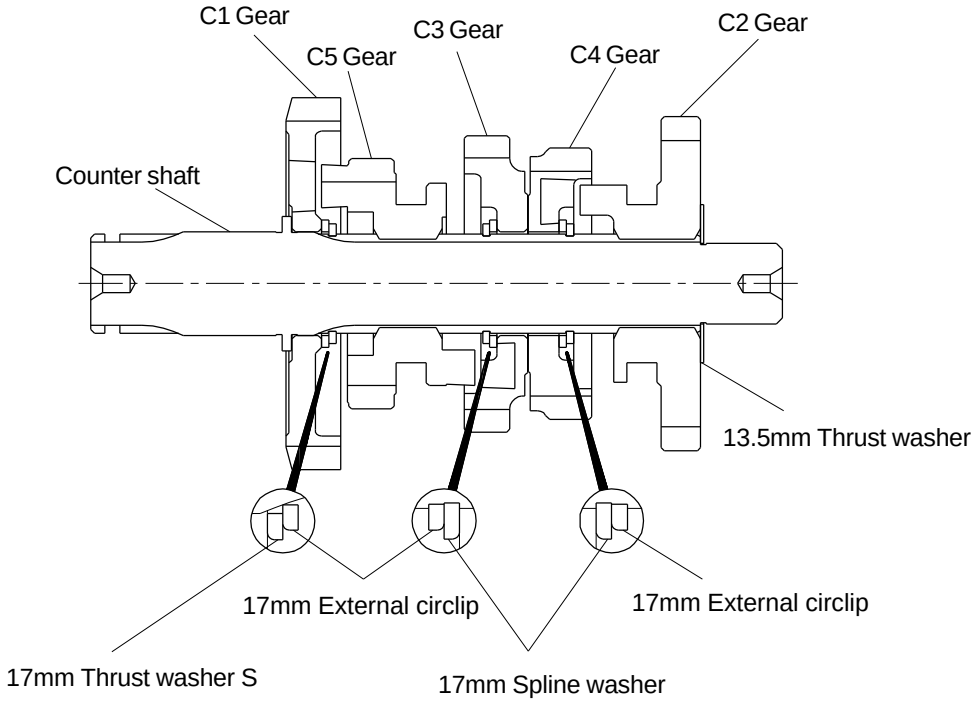
◎ Reinstall back the removed parts with reference to the service manual. Shift the transmission into NEUTRAL, and start the engine. Then check every component for oil leak. If nothing is wrong, do a test run at slow speed in a safe place to check how the transmission works.

Transmission assembly drawing:

Main shaft assembly



Counter shaft assembly



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